APPENDIX A: PENDING CLAIMS AS OF JULY 9, 2003

U.S. APPLICATION NO. 10/009,945; ATTORNEY DOCKET NO. 10624-092-999

- 37. A Smurf polypeptide comprising greater than 70% homology with an amino acid sequence depicted in SEQ ID NO:2.
- 38. The Smurf polypeptide of claim 37 comprising an amino acid sequence depicted in SEQ ID NO:2.
- 39. The Smurf polypeptide of claim 37 comprising greater than 90% homology with an amino acid sequence depicted in SEQ ID NO:2.
- 40. The Smurf polypeptide of claim 37 or 39 comprising a mutation corresponding to C710A.
- 41. A Smurf polypeptide comprising greater than 70% homology with an amino acid sequence depicted in SEQ ID NO:4.
- 42. The Smurf polypeptide of claim 41 comprising an amino acid sequence depicted in SEQ ID NO:4.
- 43. The Smurf polypeptide of claim 41 comprising greater than 90% homology with an amino acid sequence depicted in SEQ ID NO:4.
- 44. The Smurf polypeptide of claim 41 or 43 comprising a mutation corresponding to C716A.
- 45. A nucleic acid which encodes SEQ ID NO:2.
- 46. The nucleic acid of claim 45 comprising a nucleotide sequence depicted in SEQ ID NO:1.
- 47. A nucleic acid comprising at least about 70% homology with a nucleotide sequence depicted in SEQ ID NO:1.

- 48. The nucleic acid of claim 47 comprising at least about 80% homology with a nucleotide sequence depicted in SEQ ID NO:1.
- 49. The nucleic acid of claim 47 or 48 comprising a mutation corresponding to C710A.
- 50. An oligonucleotide or nucleic acid that specifically hybridizes to a nucleic acid which encodes SEQ ID NO:2 under highly stringent conditions.
- 51. An isolated nucleic acid which encodes SEQ ID NO:4.
- 52. The nucleic acid of claim 51 comprising a nucleotide sequence depicted in SEQ ID NO:3.
- 53. A nucleic acid comprising at least about 70% homology with a nucleotide sequence depicted in SEQ ID NO:3.
- 54. The nucleic acid of claim 53 comprising at least about 80% homology with a nucleotide sequence depicted in SEQ ID NO:3.
- 55. The nucleic acid of claim 53 or 54 comprising a mutation corresponding to C716A.
- 56. An oligonucleotide or nucleic acid that specifically hybridizes to a nucleic acid which encodes SEQ ID NO:4 under highly stringent conditions.
- 57. A vector comprising a nucleic acid which encodes SEQ ID NO:2.
- 58. A host cell comprising the vector of claim 57.
- 59. A vector comprising a nucleic acid which encodes SEQ ID NO:4.
- 60. A host cell comprising the vector of claim 59.
- 61. A method for producing an amino acid sequence depicted in SEQ ID NO:2 which comprises growing a host cell which expresses the amino acid sequence depicted in SEQ ID NO:2.
- 62. A method for producing an amino acid sequence depicted in SEQ ID NO:4 which comprises growing a host cell which expresses the amino acid sequence depicted in

SEQ ID NO:4.

- 63. A transgenic non-human animal which expresses an amino acid sequence depicted in SEQ ID NO:2.
- 64. A transgenic non-human animal which expresses an amino acid sequence depicted in SEQ ID NO:4.
- 65. A method for inhibiting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises expressing an isolated nucleic acid which encodes SEQ ID NO:2.
- 66. A method for promoting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises suppressing endogenous expression of an amino acid sequence depicted in SEQ ID NO:2.
- 67. A method for inhibiting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises expressing an isolated nucleic acid which encodes SEQ ID NO:4.
- 68. A method for promoting a bone morphogenic protein or tumor growth factor-beta activation pathway in a cell which comprises suppressing endogenous expression of an amino acid sequence depicted in SEQ ID NO:4.
- 69. A method of screening for a modulator of Smurf activity which comprises detecting modulation of Smurf activity in the presence of a test compound relative to Smurf activity in the absence of the test compound.
- 70. The method according to claim 69, wherein the Smurf activity is ubiquitination of a Smad polypeptide in a host cell.
- 71. The method according to claim 69, wherein the Smurf activity is interaction of a Smurf WW domain with a PPYX domain of a Smad polypeptide.
- 72. The method according to claim 71, wherein the test compound is screened for the ability to inhibit the interaction.

- 73. An antibody which specifically binds to an amino acid sequence depicted in SEQ ID NO:2.
- 74. An antibody which specifically binds to an amino acid sequence depicted in SEQ ID NO:4.